

David M. Stagliano

Aquatic Ecologist

Montana Natural Heritage Program,
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David is an aquatic ecologist with 12 years of professional experience in wetland, stream & river ecology. Principal areas of expertise include the field collection and taxonomy of aquatic invertebrates, unionids and fish communities for use in environmental assessments of stream and river integrity. Additional expertise includes landscape-level ecological studies of stream communities & conservation of aquatic ecosystems, including work w/ threatened & endangered species. Excellent communication, data analysis and presentation skills.

Recent Projects:

Aquatic Ecosystem Diversity in Montana's Missouri Drainages: Community Classification

Project (Final Report: <http://mtnhp.org/reports.asp#ecology> September 2005) Bureau of Land Management: MT State Office. Contact: Gayle Sitter or Mike Philbin (406)-896-5041

An Assessment and Mapping of G1-G3 Aquatic Species of Concern within the Region 1 US Forest Service Boundaries (May 2006). Contact: Ann Carlson: (406) 329-3087

Middle Powder River Monitoring: A Watershed Assessment (June 2005-2006). contact: Joe Platz, BLM Miles City FO (406) 233-2867. http://nhp.nris.state.mt.us/Reports/Mid_Powd_Riv_Water_Assess.pdf

Butte BLM Field Office-Stream Monitoring (June 2005-2006) Sarah LaMarr: (406) 533-7636

A Multi-Discipline Integrative Assessment of Lotic Sites in the Custer National Forest (Ashland Ranger District) (May 2005-2006). http://nhp.nris.state.mt.us/Reports/Custer_Forest_Project_2006.pdf
Contact: Don Sasse (406) 784-2335 Ext. 111

A Biological Assessment of Sites in the Custer National Forest (Ashland District) Using Aquatic Macroinvertebrates. (May-Sept 2004). Contact: Don Sasse (406) 784-2335 Ext. 111

Methods Comparability Study: Effects of Mesh Sizes on MT DEQ Benthic Macroinvertebrate Sampling. (June 2004). Contact: Tina Laidlaw, EPA (406) 457-5016

Education

- **M.S. Kansas State University (2000) Major: Aquatic Entomology/Stream Ecology**, (Thesis listed in publications)
- Graduate Studies in Aquatic Biology, University of Alabama, (1994-1995)
- **B.S. Cornell University (1992) Major: Biology**, concentration Ecology/minor Fisheries

Job-Related Skills:

- **Extensive experience: Aquatic Macroinvertebrate field collection & stream habitat surveys (15 field seasons), fish surveys (10 field seasons), Unionid (Mussel) Surveys, including SCUBA and HUCA (6 field seasons).**
- **Extensive experience: statistical analysis programs: PCOrd, SPSS, Database program: Microsoft Access; Spreadsheet and Word programs: Excel, Microsoft Word**
- **Moderate experience: statistical programs: SAS, GIS (ArcView)**

Teaching Experience:

- **1999 & 2000 Schoolyard LTER (2 day course).** Instructed Kansas high school teachers/students in data collection for use in the Long Term Ecological Program at Konza Prairie Research Natural Area.
- **1999 Teaching and Lab Assistant** (Fall Semester) for Aquatic Entomology 699 a graduate-level ecology course, Professor Dr. Ralph Charlton, Kansas State University
- **1993 Teaching and Lab Assistant.** Stream Ecology 458, an undergraduate-level ecology course, Department of Entomology, Dr. Bobbi Pearsall, Cornell University.

Professional Experience:

AQUATIC ECOLOGIST

Oct 2003-present

Montana Natural Heritage Program, 1515 E. 6th St., Helena, MT

- Principal duties include completing aquatic community related projects for The Nature Conservancy, BLM, and other agencies (described above). Building a searchable aquatic community database for web-availability, and contributing to the mission of conservation of aquatic species and habitats.

AQUATIC ECOLOGIST/ TAXONOMIST

Oct 2001-Oct 2003

EcoAnalysts, Inc. 105 E. 2nd St., Moscow, ID

- Principal duties included identifying macroinvertebrates & analyses of state, federal and private bioassessment samples & 6 months as Taxonomic Coordinator (ensuring QA/QC standards are being met by the Taxonomic team, and projects are completed on time/within budget).
- Macroinvertebrate projects: USGS NAWQA, EPA EMAP (MT, OR, WA, ND), Montana FW& P, ID DEQ, Idaho Power, Kootenai Tribe, SD School of Mines, ENTRIX, Stillwater Sciences, Anchor Environmental, The Nature Conservancy.

ASSOCIATE AQUATIC ECOLOGY PROGRAM LEADER

April 2000-October 2001

Michigan Natural Features Inventory, Lansing MI

- Principal duties included coordinating projects investigating aquatic communities (fish, mussels and insects) under the mission of Nature Conservancy's Heritage Program & state ESA act
- Research was published in state reports and reported at scientific meetings. Samples below:
http://www.msue.msu.edu/mnfi/abstracts/aquatics/lampsilis_fasciola.pdf
http://www.msue.msu.edu/mnfi/abstracts/aquatics/moxostoma_carinatum.pdf
<http://www.deq.state.mi.us/documents/deq-ogl-MGLPF-goforth.pdf>

RESEARCH ASSISTANT

July 1998- April 2000

Kansas State Univ., Dept of Entomology

Drs. Matt Whiles / Ralph Charlton

- Researched environmental monitoring with aquatic insects and fish as bioassessment tools for prairie streams undergoing construction by a PGA golf course. Stream bioassessment studies on the Fort Riley Military Installation (DOD funded) & Topeka shiner research (USF&W Service).
- Community dynamics & ecology of aquatic insects in a Konza Prairie (Nature Conservancy) stream.

ENVIRONMENTAL SCIENTIST

April-July 1998

American Aquatics Inc. consultant w/ TVA

Aquatic Biology Lab, Norris, TN

- IBI's using fish, invertebrates, and water quality parameters for the Clean Water Initiative (CWI) monitoring program in Tennessee Valley (Clinch & Powell River Basins).
- Involved in educational outreach programs (Kids in the Creek, Girl Scouts) promoting CWI.

BIOTECHNICIAN / INVERTEBRATE TAXONOMIST

Aug 1995-October 1997

NFT Inc. consultant w/ U.S. Geological Survey

National Water Quality Lab (Bio Unit), Arvada, CO

- Responsible for processing benthic macroinvertebrate samples (genus/species level) under USGS's National Water Quality Assessment (NAWQA) Program from watersheds within the U.S. in accordance with QA/QC protocol. Released data to be used in technical reports. Diptera Specialist. Field equipment manager.

INVERTEBRATE SPECIALIST

May-August 1995

Consultant w/ U.S. Dept. of Agriculture

Fayette Co., AL

- Assisted in field sampling and lab identification of aquatic insects and fishes from a pesticide (Malathion) impacted stream using EPA RBAP I-IV bioassessment techniques.

AQUATIC ECOLOGY RESEARCH TECHNICIAN

April 1993-August 1995

University of Alabama, Aquatic Biology Program

Dr. A.C. Benke, Professor of Ecology

- Researched production dynamics and taxonomy of aquatic insects from a wetland ecosystems.
- Responsible for coordination of all aquatic invertebrate field sampling and laboratory analysis. Supervised undergraduates, graduate research & maintained supplies, field equipment & inventory.

RESEARCH TECHNICIAN

May 1991-January 1993

Boyce Thompson Institute, Ithaca, New York

Dr. Ann Hajek, Mycologist / Entomologist

- Researched the feeding habits & biological control of gypsy moth larvae with a pathogenic fungus.
- Involved extensive forest surveys in field sites locally and in Virginia's Blue Ridge Mtns.

FIELD ASSISTANT

April 1992

Department of Entomology, Cornell University

- Assisted in the sampling, identification of freshwater invertebrates and calculation of biotic indices to biomonitor a local stream exposed to point-source pollution.

Technical Training

- **Ephemeroptera Taxonomic Workshop.** June 2005. Sponsored by Northwest Biological Assessment Workgroup, Xerces Society, Idaho University, Moscow, ID
- **Prairie Fish Identification Course.** April 2004. Sponsored by Montana State University, Fisheries Co-op Division, Bob Bramblett instructor.
- **Aquatic Worm and Mollusk Taxonomic Workshop.** April 2002. Sponsored by Northwest Biological Assessment Workgroup, Xerces Society, Boise State University, Boise, ID
- **Freshwater Mollusk Taxonomic Workshop.** June 2001. Sponsored by North American Benthological Society. LaCrosse, WI
- **Natural Heritage Methodology Training Workshop,** Oct. 2000. Sponsored by The Nature Conservancy, Arlington, VA
- **Mussel Identification Workshop,** May 2000. Renee Sherman and Pete Badra instructors. Sponsored by Univ. of Mich. Natural History Museum, Mussel Collections, Ann Arbor, MI.
- **Electro-fishing Training,** May 2000. Sponsored: Michigan Department of Natural Resources, Lansing, MI.
- **First Aid / CPR Training,** June 2000. Sponsored: Michigan Department of Natural Resources, Lansing, MI.

- **SCUBA Certification Course & Specialty Diver** (Dry Suit) Dive Tests. May 2000, SCUBA Schools International, Lansing, MI.
- **Jet Boat Safe Operation.** June 2000. Sponsored: Michigan Dept of Natural Resources, Lansing, MI.
- GIS Arc view 3.2 Workshop, 2000, Lorri Peltz-Lewis instructor. Sponsored by Michigan Department of Natural Resources, Lansing, MI
- **Aquatic Oligochaeta Workshop**, 1997, Dr. Mark Wetzel of the Illinois Natural History Survey. Sponsored by USGS Biological Unit, Lakewood, CO
- **Rosgen Classification** (Level I), 1997, David Rosgen, instructor. Sponsored by U.S. Geological Survey Biological Unit, Lakewood, CO
- **Invertebrate Taxonomic Workshop**, 1996, Dr. Steve Moulton and Tom Cuffney, instructors. Sponsored by U.S. Geological Survey Biological Unit, Lakewood, CO

Professional Memberships & Interests

- Xerces Society
- North American Benthological Society
- American Fisheries Society MT Chapter
- Entomological Society of America,
- Trout Unlimited, The Nature Conservancy, American Rivers. Hiking & Backpacking, Fishing, Photography, Canoeing. SCUBA certified (Specialty Diver)

Honors & Awards

- 2006 Public Outreach Award. American Fisheries Society, Western Regional Meeting, Bozeman, MT
- 1999 President's Award for Best Oral Presentation. National Meeting of the Entomological Society Ecology Section, Atlanta, GA
- 1999 Spide O Morris Award for Public Outreach in Entomology. Kansas State University.
- 1998 M.C. Smith Award for M.S. Entomology. Kansas State University.
- 1998 Poster Presentation Award Natural Resources/ Enviro Session of NREAS, Kansas St. Univ.
- 1996 Wizard of Science Fair Review, Kyffin Elementary School, Golden, CO
- 1988 Greenway-Lowell Fish & Game Environmental Studies Award, Rome, NY

Presentations/Seminars

- **2005 North American Benthological Society, 54th Annual Meeting**, June, New Orleans, LA
Comparability of Benthic Macroinvertebrate Sampling Methods in Montana Streams
David L. Feldman, Tina Laidlaw, Benjamin Jessup, James B. Stribling, David Stagliano, and Wease Bollman
- **2005 North American Benthological Society, 54th Annual Meeting**, June, New Orleans, LA.
Comparing the Effects of Mesh Size on Benthic Macroinvertebrate Performance Characteristics in Montana streams. Tina L Laidlaw, Ben Jessup, David Stagliano, James B. Stribling & Wease Bollman.
- **2005 Montana Chapter of the American Fisheries Society**, Feb. Missoula, MT.
Prairie Fish Community Assessments: Scientific Uses with Implications for Conservation
- **2004 Invited Presentation & Panelist Member: Aquatic Monitoring & Biological Assessments: Scientific Uses With Implications for Conservation.** (Nov) MWCC Water Quality Monitoring Work Group. Contact: Tom Pick (406)-587-6947

- **2004 USDI BLM All-Biologists Meeting**, Billings, MT. Prairie Stream Aquatic Communities on BLM lands: Uses in Community Classification, Conservation and Bioassessment.
- **2004 State Library Lecture Series**, Helena, MT. Missouri River Aquatic Communities: From the Mountains to the Prairies
- **2003 Society for Conservation Biology**, 17th Annual Meeting, August, Duluth, MN. Biodiversity Patterns Associated with Varied Riparian Properties of southern Michigan's Fragmented Landscape.
- **2001 North American Benthological Society**, 49th Annual Meeting, June, LaCrosse, WI. Biodiversity of Aquatic Benthic Communities of southern Michigan: Can predictions be made?
- **2000 North American Benthological Society**, 48th Annual Meeting, June, Keystone, CO. Secondary Production and Trophic Structure of Aquatic Insects from a Tallgrass Prairie Stream.
- **2000 Colbert Hills Concerned Citizens Committee**, April. Effects of Landscape Disturbance on the Fish and Insect Communities of Colbert Hills Headwater Streams.
- **Konza Prairie Ecology Symposium**, March, Kansas State Univ. Fish and Aquatic Insect Communities of Prairie Headwater Streams: Tools for Assessment and Bioenergetics.
- **Water and the Future of Kansas Conference**, Invited Presentation, Feb, 2000 Manhattan, KS. Wildcat Creek: the Tale of a Neglected Stream
- **SW Branch of the Entomological Society**, 48th Annual Meeting, Feb 2000, Fort Worth, TX. Secondary Prod. and Trophic Structure of Aquatic Invertebrates from a Tallgrass Prairie Stream.
- **1999 Entomological Society of America**, National Meeting, Dec, Atlanta, GA. Aquatic Insect Production and Trophic Structure in a Tallgrass Prairie Stream.
- **1999 Kansas Entomological Society**, 75th Annual Meeting, Manhattan, Kansas. The Aquatic Insect Community in a Tallgrass Prairie Stream: Patterns of Abundance and Biomass.
- **Water and the Future of Kansas Conference**, Feb 2000, Manhattan, KS. Assessing Environmental Impacts Using Prairie Stream Biological Communities.
- **1998 National Research & Agric. Extension Symposium**, Kansas State Univ. Assessing Environmental Impacts on Colbert Hills using Fish and Aquatic Insect Communities.
- **1996 North American Benthological Society**, 44th Annual Meeting, Kalispell, MT. Diversity and Emergent Production of an Insect Community at the Land-Water Interface of a Southern Wetland.
- **1995 North American Benthological Society**, 43rd Annual Meeting, Keystone, CO. Emergence Phenology and Production of Aquatic Insects from an Alabama Wetland Ecosystem.
- **1993 Teacher Assistant**, Freshwater Invertebrate Section of Stream Ecology 458, Cornell Univ.

- 1992 USDA Forest Service IPM Task Force, Elkins, WV. Assessing the Gypsy Moth (*Lymantria dispar* Lymantriidae) expansion into the mid-Atlantic states.

Publications/Reports

Stagliano, D.M. 2004. A Biological Assessment of Sites in the Custer National Forest (Ashland Ranger District) Using Aquatic Macroinvertebrates. Report to the Custer National Forest (Ashland Ranger District) Ashland, MT. 22pp.

Stagliano, D.M. 2003. Biodiversity of Aquatic Communities of the Missouri River Basin: A classification system. Report to the Montana Natural Heritage Program, Helena, MT

Stagliano, D.M., and M.R. Whiles. 2002. Macroinvertebrate production and trophic structure in a tallgrass prairie headwater stream. *Journal of N. American Benthological Society* 21(1): 97-113.

Stagliano, D.M., 2001. Fish and macroinvertebrate communities of headwater prairie streams: bioindicators, bioenergetics and production. M.S. Thesis, Kansas State University. 140 pages.

Goforth, R.R., **D.M. Stagliano**, J. Cohen, M. Penskar, Y.M. Lee, J. Cooper. 2001. Biodiversity analysis of selected riparian ecosystems within a fragmented landscape. Michigan Department of Environmental Quality, Office of the Great Lakes. Report # 2001-06. 148 pages.

Dodds, W.K., M.A. Evans, N. Gerlanc, L.Gray, D.Gudder, M. Kemp, A. López, **D.M. Stagliano**, E. Strauss, J. Tank, M. Whiles. 2000. Quantification of the Nitrogen Cycle in a Prairie Stream. *Ecosystems* 3: 574-589.

Stagliano, D.M. 2000. Volunteer water quality monitoring: Informative and fun. AFS Chapter Activities. *Fisheries*. Vol. 25 (6): 34.

Bernot, R, T. Horton, J. Jeffrery, M. Kemp, M. Quist, S. Schrank, **D. Stagliano** and C. Zachary. 1999. Methods Manual for Aquatic Ecological Research: Long-term Monitoring of Pottawattomie State Lake II and Kings Creek, Kansas. Kansas State University. 55 pages.

Benke, A.C., G.M. Ward & T.D. Richardson 1999. Beaver-Impounded Wetlands of the SE Coastal Plain. Pages 217-245 in D.P. Batzer, R.B. Rader & S.A. Wissinger (eds.), *Invertebrates in Freshwater Wetlands of North America*. John Wiley & Sons Inc.

Stagliano, D.M., A.C. Benke, & D.H Anderson. 1998. Emergence of aquatic insects from two wetland habitats in the southeastern USA: patterns of numbers and biomass. *Journal of the North American Benthological Society* Vol.17, pp. 21-36.

Volunteer Outreach Projects:

2002 Palouse Clearwater Environmental Institute. Moscow, ID Paradise Creek. Stream enhancement
2000 Schoolyard LTER. Assisted KS high school teachers and students in data collection for use in the Long Term Program at the Konza Prairie Research Natural Area.

1999 Schoolyard LTER. Instructed KS high school teachers in watershed data collection

- for use in the Long Term Program at the Konza Prairie Research Natural Area.
- 1999 Fisheries Outreach.** Manhattan High School Stream Team Water Quality Assessments.
- 1998 Entomology Club.** Konza Prairie Educational Outreach w/ area HS students.
- 1998 Friends of Big South Fork.** Big South Fork Nat. Rec. Area, TN. Trail maintenance.
- 1998 Trout Unlimited.** Great Smoky Mountains National Park, TN. Acid Deposition Training Workshop to prepare for the quarterly sampling events to monitor reference streams.
- 1997 Trout Unlimited.** Clear Creek Canyon, Golden, CO. Stream enhancement / clean up.
- 1996 Trout Unlimited.** South Platte River, Fairplay, CO. Instream habitat / riparian stabilization.
- 1996 Trout Unlimited.** Windy Peak Environmental Lab, Bailey, CO. Aquatic Entomology Demonstration and Lecture for children and their parents at an open house.
- 1995 Alabama Water Watch.** Tuscaloosa, AL. Sampled Water Quality Parameters from ponds and streams in the county, explaining basic aquatic biology to 6th grade elementary classes.
- 1994 Trout Unlimited.** Riverside Chapter, Jasper, AL. Sampled Biological Parameters of a river section for a proposed trout stocking program. Characterized rifle/pool habitat.

Additional References

Dr. Reuben Goforth
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